

Patent Abstracts of Japan

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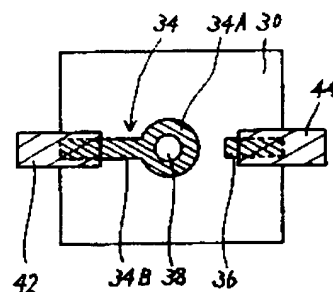
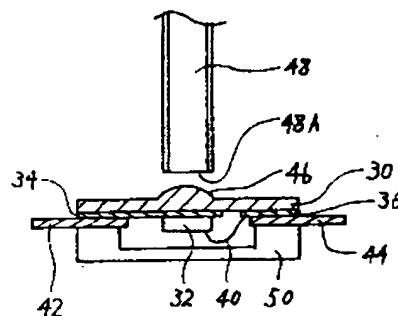
APPLICATION DATE : 21-01-84
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APPLICANT : SUMITOMO ELECTRIC IND LTD;

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TITLE : LIGHT RECEIVING ELEMENT



ABSTRACT : PURPOSE: To obtain the titled element having a small interterminal static capacitance and unnecessitating high accuracies in the positioning of a light receiving element chip to the lens center by a method wherein a substrate is thinned and a condenser lens is made integral with the substrate, and an insulator package is used for the light receiving element chip.

CONSTITUTION: The substrate 30 of the illustrated light receiving element is made of insulating glass which is optically transparent in a light receiving wavelength band and chemically stable. A photoelement chip 32 is fixed to the lower surface of this substrate 30, and bonding pads 34 and 36 are formed. The pad 34 has a circular part 34A, and a photo receiving window 38 is formed at the center of this part 34A. The electrode around the photo receiving window of the chip 32 is diebonded to the circular part 34A of the pad 34 so that the photo receiving plane of the chip 32 may be coincident with the window 38. On the other hand, the electrode on the opposite side of the photo receiving plane of the chip 32 is connected to the pad 36 with a wire 40, and outer leads 42 and 44 are connected to the pads 34 and 36, respectively. The condenser lens 46 is integrally formed to the upper surface of the substrate 30 in agreement with the window 38. Further, the chip 32 is encircled and the peripheral edge of a cap 50 is hermetically sealed to the lower surface of the substrate, thus completing the titled element.

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